

Fig. 1

Computer Network

100 ↙

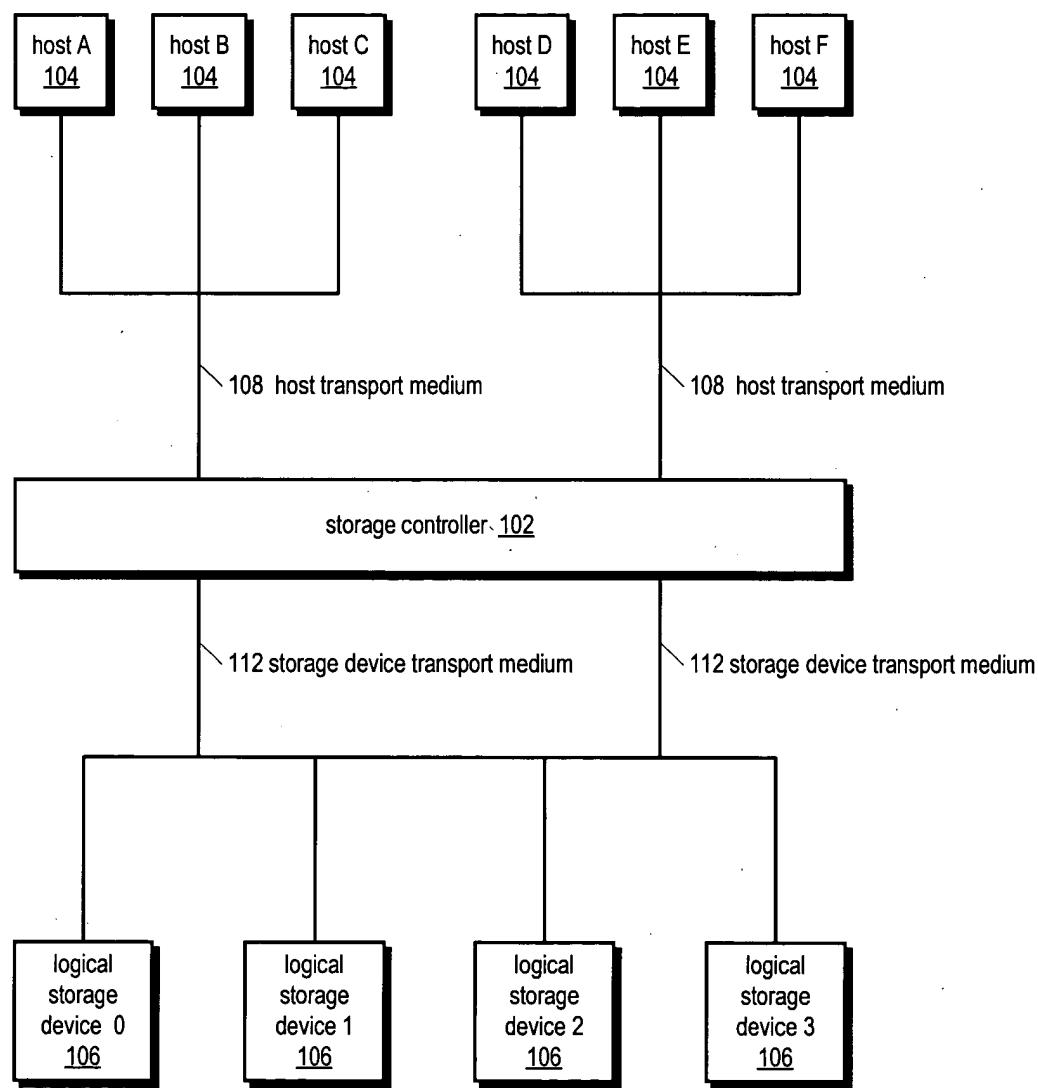


Fig. 2

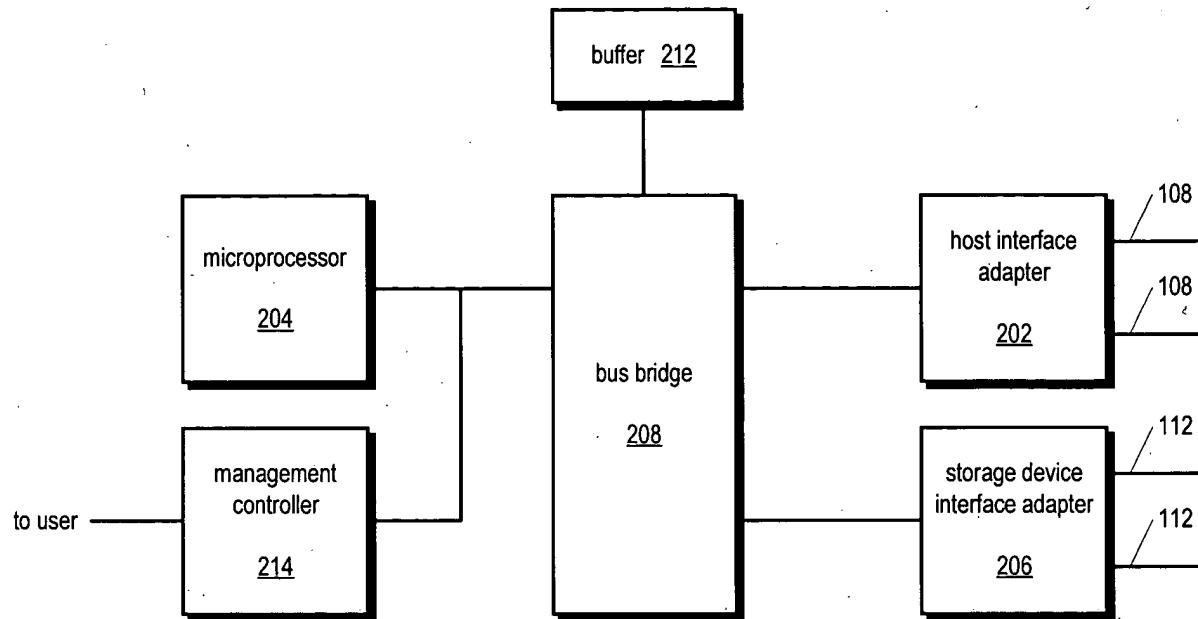
Storage Controller

Fig. 3

Access Control Table

300

LSD ID	access type	host list
0	include list	C, D, E
1	exclude list	B, E
2	exclude all	n/a
3	include all	n/a
4	exclude all	n/a
5	exclude all	n/a
6	exclude all	n/a
7	exclude all	n/a

Fig. 4

Access Control Table (Alternate Embodiment)

400

host ID	LSD ID list
A	1,3
B	3
C	0, 1, 3
D	0, 1, 3
E	0, 3
F	1, 3

Fig. 5

Mapping Table

500

host ID      external LSD ID to internal LSD ID mapping list

A	(0,1) (1,3) (2,X) (3,X) (4,X) (5,X) (6,X) (7,X)
B	(0,3) (1,X) (2,X) (3,X) (4,X) (5,X) (6,X) (7,X)
C	(0,1) (1,3) (2,0) (3,X) (4,X) (5,X) (6,X) (7,X)
D	(0,1) (1,3) (2,0) (3,X) (4,X) (5,X) (6,X) (7,X)
E	(0,3) (1,0) (2,X) (3,X) (4,X) (5,X) (6,X) (7,X)
F	(0,1) (1,3) (2,X) (3,X) (4,X) (5,X) (6,X) (7,X)

Fig. 6

Mapping Table (Alternate Embodiment)

600

external  
LSD ID      host to internal LSD ID mapping list

0	(A,1) (B,3) (C,1) (D,1) (E,3) (F,1)
1	(A,3) (B,X) (C,3) (D,3) (E,0) (F,3)
2	(A,X) (B,X) (C,0) (D,0) (E,X) (F,X)
3	(A,X) (B,X) (C,X) (D,X) (E,X) (F,X)
4	(A,X) (B,X) (C,X) (D,X) (E,X) (F,X)
5	(A,X) (B,X) (C,X) (D,X) (E,X) (F,X)
6	(A,X) (B,X) (C,X) (D,X) (E,X) (F,X)
7	(A,X) (B,X) (C,X) (D,X) (E,X) (F,X)

Fig. 7

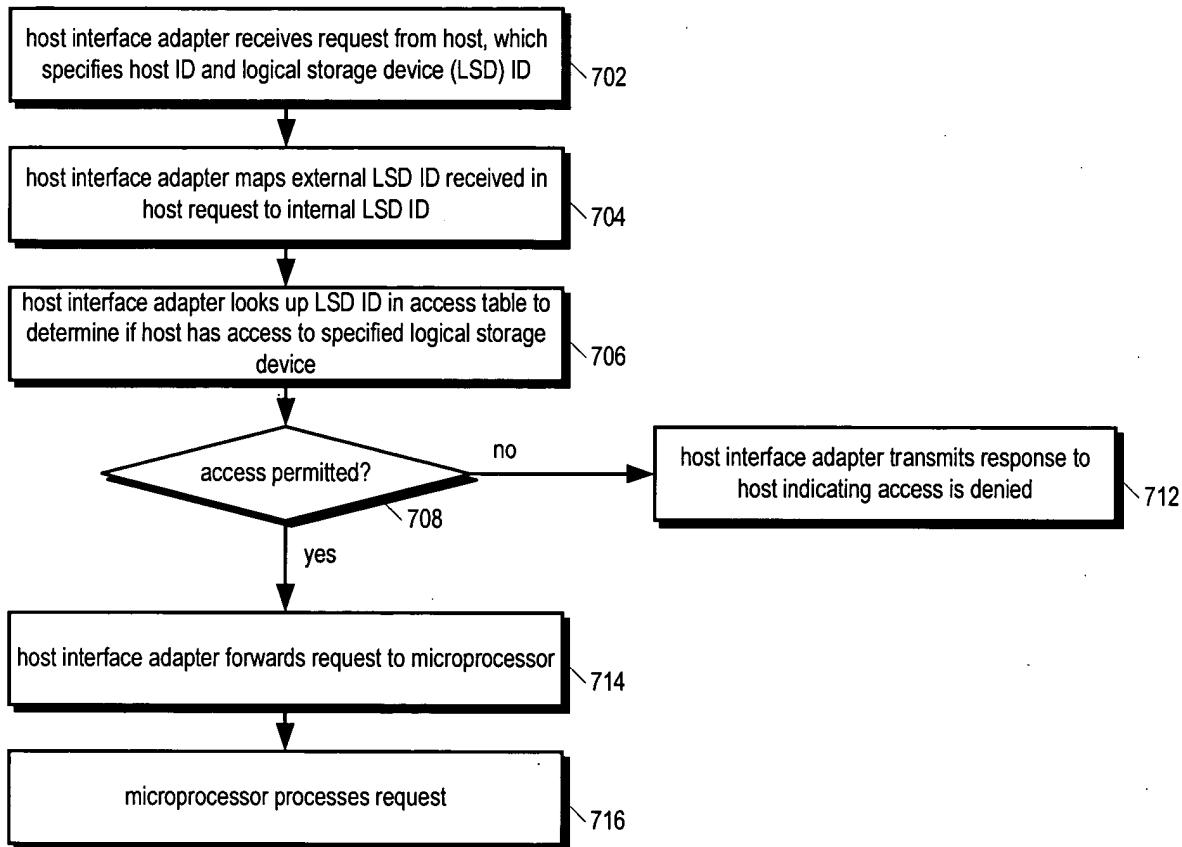
Access Control Operation

Fig. 8

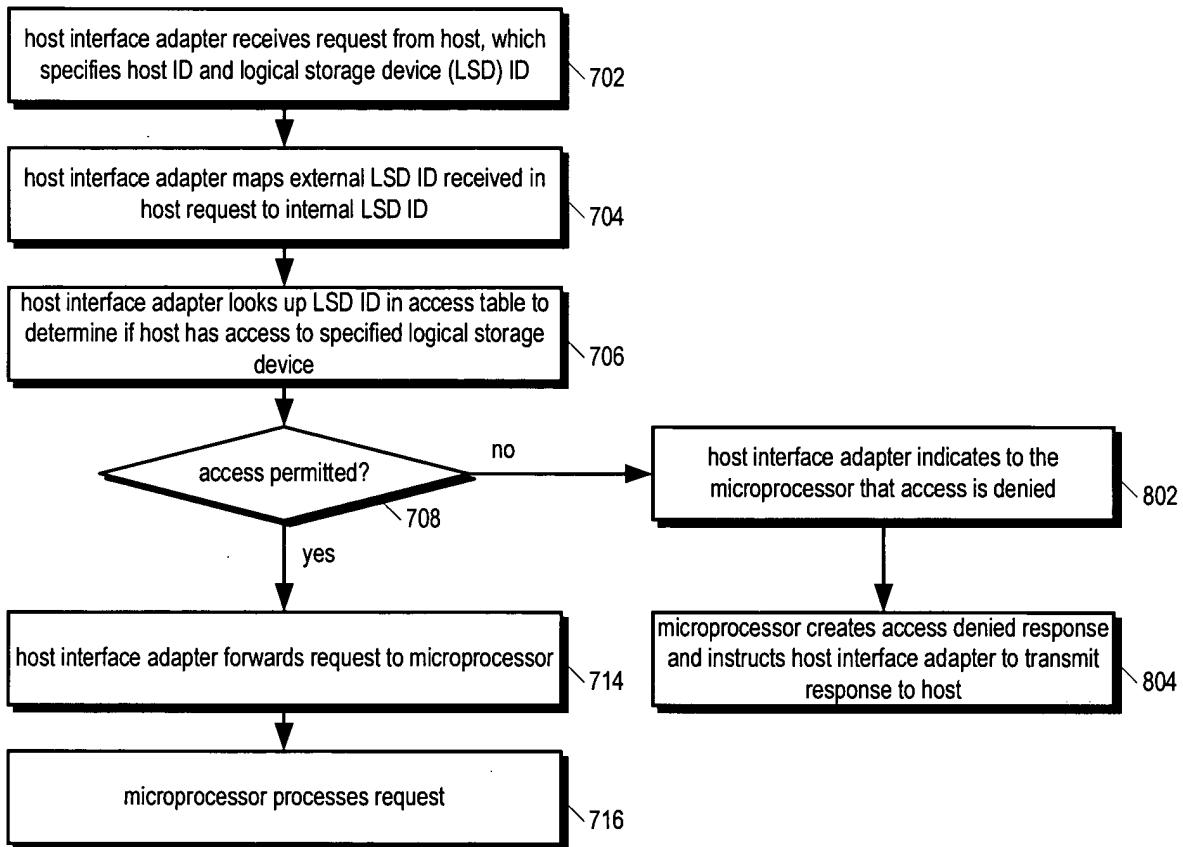
Access Control Operation

Fig. 9

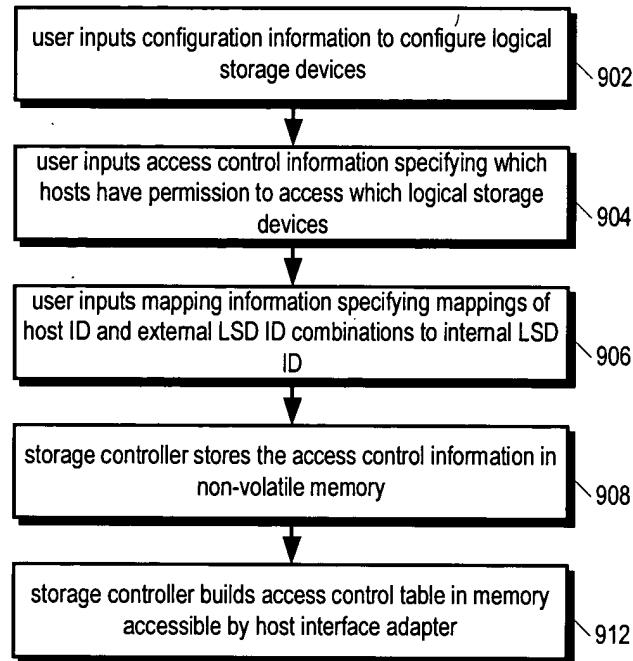
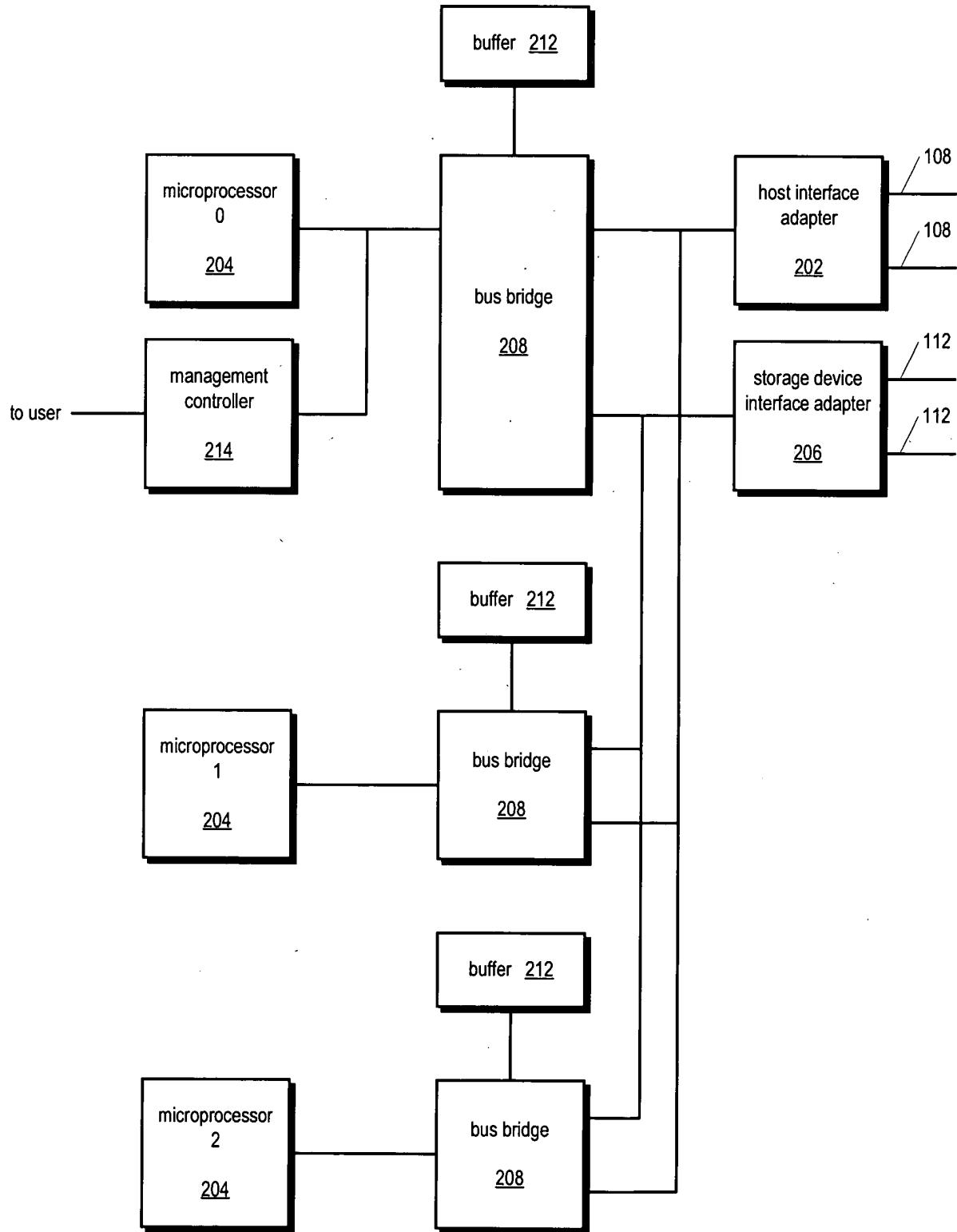
Access Control Table and Mapping Table Creation

Fig. 10

Storage Controller

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Fig. 11

Access Control Table

(Alternate Embodiment Supporting Request Routing)

1100  
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LSD ID	access type	host list	microprocessor
0	include list	C, D, E	0
1	exclude list	B, E	2
2	exclude all	n/a	1
3	include all	n/a	1
4	exclude all	n/a	0
5	exclude all	n/a	0
6	exclude all	n/a	0
7	exclude all	n/a	0

Fig. 12

Access Control Operation with Request Routing